OBJECTIVES: Bacterial lysates reduce acute exacerbations for patients with chronic obstructive pulmonary disease. The purpose of this study was to conduct a cost-benefit analysis of bacterial lysates from a payer perspective through the results from a Meta analysis and a Delphi panel survey in China. **METHODS:** A cost-benefit analysis was to project the 12-month health benefits and costs associated with immunostimulation treatments. Acute exacerbations were served as a measure of effectiveness. Treatment effectiveness data were derived from the meta-analysis. Costs were obtained from a Delphi panel survey of treating acute exacerbation for chronic obstructive pulmonary disease in China. One-way sensitivity analysis was used to explore each parameter's impacts on the uncertainty of the results. **RESULTS:** The group receiving routine care only was dominated by the group with bacterial lysates plus routine care. Sensitivity analysis proved the robustness of the results. For a COPD patient, compared to the routine care as control group, the alternative treatment with bacterial lysates could reduce 1.9 exacerbations in 12 months (WMD, -1.865; 95% CI, -2.128 to -1.603; P<0.00001). The projected 12-month cost savings of a patient receiving bacterial lysates plus routine care was CNY14476. The cost of patients receiving bacterial lysates plus routine care was significantly lower than those receiving routione care only. **CONCLUSIONS:** For patients with COPD, treatments with bacterial lysates can improve patient outcomes and reduce costs.

PRS16

MODELING THE COST-EFFECTIVENESS OF 100% WHEY-BASED PARTIALLY HYDROLYZED VERSUS. COW'S MILK INFANT FORMULA IN THE PREVENTION OF ATOPIC DERMATITIS IN SINGAPORE

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OBJECTIVES: To assess, from a societal perspective, the cost-effectiveness of 100% whey-based partially hydrolyzed infant formula (pHF-W) compared to standard cow's milk formula (CMF) as an early, short-term nutritional intervention to prevent atopic dermatitis (AD) in high-risk Singaporean infants. **METHODS:** A Markov model was developed to simulate, from birth through age 6, the incidence of AD and its ensuing burden in cohorts of high-risk infants fed with pHF-W or CMF during for the first 4 months of life. Epidemiologic and clinical data were from the German Infant Nutritional Intervention (GINI) trial. AD treatment patterns and outcomes were based on expert opinion. Key modeled outcomes included reduction in AD risk, time spent after an AD diagnosis, days with AD symptoms, quality-adjusted life years (QALYs), and direct/indirect costs (in 2013 Singapore $). A 3% annual discount rate was used. Multivariate probabilistic sensitivity analysis was used to generate 95% probabilistic confidence intervals (CI) around the modeled outcomes. **RESULTS:** Feeding high-risk infants pHF-W instead of CMF resulted in reductions of (i) 14-percentage points (95% CI: 3%, 24%) in the 6-year risk of AD, (ii) 8.25 months (95% CI: 5.00, 11.61) in the time spent post-AD diagnosis, and (ii) 14.6 days (95% CI: 8.9, 20.3) with AD symptoms; and in an increase of 0.022 QALYs (95% CI: 0.008, 0.074). Estimated AD-related discounted cost (all per child) when feeding high-risk infants with pHF-W vs. CMF were $1,316 (95% CI: $858, $2028) and $2,055 (95% CI: $1,443, $2,820), respectively, for a net difference favoring pHF-W of $739 (95% CI: $1,138, $326). The mean overall and annualized (undiscounted) cost of AD per child developing AD was $5,814 and $1,392, respectively. **CONCLUSIONS:** This mathematical model suggests that the burden of AD in childhood is high and that feeding high-risk infants with pHF-W instead of CMF should reduce this burden.

PRS17

COST-EFFECTIVENESS OF THE TREATMENT OF RESPIRATORY DISEASES OF XIYANPING INJECTION : A SYSTEMATIC REVIEW

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OBJECTIVES: To systematically review the economic evaluations of the Xiyanping injection to treat respiratory diseases. **METHODS:** Database as PubMed, ISI Web of knowledge, The Cochrane Library, CBM, WanFang Data, CNKI and VIP were electronically searched from inception to February 28st, 2014. Two reviewers independently screened studies according to inclusion and exclusion criteria and extracted data. Then, descriptive analysis was performed for included studies. A 10-item quality checklist modified was used to appraise the quality of studies. **RESULTS:** 6 economic evaluations and cost studies were included of which 4 studies' quality were low, 1 was high and 1 was medium. All studies adequately documented effectiveness of interventions. However, the costs of interventions were not well reported in 2 studies. 2 studies inadequately conducted sensitivity analysis and discounting. The disease of 6 studies includingbronchitis(2studies), upper respiratory tract infection, herpangina, hand-foot-and-mouth disease and viral pneumonia. The studies result showed that cost-effectiveness of Xiyanping injection is poor than Tanreqing injection and have more adverse reaction in 2 studies and It is poor than Yanhuning injection, but less adverse reaction in 2 studies. Xiyanping injection is better than anti-viral medicine in 2 studies. 1study indicated that Xiyanping is more cost-effectiveness by atomized than intravenous drip. **CONCLUSIONS:** Xiyanping injection is not better than other proprietary Chinese medicine for the treatment of respiratory diseases in cost-effectiveness analysis, however it is better than anti-viral medicine, and less adverse reaction. The quality of included studies is weaken the conclusion. There remains a strong need to improve the quality of reporting.

PRS18

EVALUATION OF COST EFFECTIVENESS OF OM-85 IN CHINA

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OBJECTIVES: To demonstrate the health economic impact of OM-85, a bacterial lysates based immunostimulant, for its approved indications in China. **METHODS:** A cost effectiveness decision tree model was constructed. The model compared OM-85 with the best supportive care therapy for the treatment of chronic bronchitis and rhinosinusitis in Chinese population. Clinical efficacy and adverse events (AE) data were included in the model based on a thorough literature review. All localized direct treatment costs, including drug cost, AE costs, and medical treatment costs for underlining diseases were included from Chinese payer perspective for both OM-85 and best supportive care group. A Key Opinion Leaders (KOL) survey was conducted to validate the local treatment costs. A total of 20 senior physicians specialized in respiratory, ENT, allergy, and immunology fields were selected from tertiary hospitals in Beijing, Shanghai, Guangzhou, Hangzhou, Chongqiong, Chengdu and Wuhan to form an representative geographic sample. All physicians were requested to complete a questionnaire which included the clinical management of acute exacerbation of chronic bronchitis and rhinosinusitis in China, the management of OM-85 related AEs, and the attitude towards the clinical efficacy and effects of OM-85. Incremental cost effectiveness ratio (ICER) was calculated based on the above efficacy and cost information. **RESULTS:** The results indicate that, when compared with best supportive care therapy,OM-85 is a dominant therapy (with better clinical efficacy and lower overall costs) in Chinese population for the clinical management of chronic bronchitis and rhinosinusitis One way sensitivity analyses were performed and the ICER result was demonstrated to be robust. **CONCLUSIONS:** Based on its clinical efficacy in preventing acute exacerbations of chronic bronchitis and rhinosinusitis, OM-85, when compared with standard care therapy, proved to be a dominant therapy (better clinical efficacy and lower overall costs) in Chinese population for the clinical management of chronic bronchitis and rhinosinusitis.

PRS19

RESOURCE UTILIZED IN A RANDOMIZED CLINICAL TRIAL TO RECRUIT SMOKERS WITH LOW MOTIVATION TO QUIT

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OBJECTIVES: Unmotivated smokers are a unique population and have rarely been specifically targeted for recruitment into smoking cessation trials. While accurate cost data are essential to estimate resource utilization in replicating an intervention, currently the costs of recruiting unmotivated smokers are not reported in the literature. We aim to describe the costs and recruitment methods associated with successful enrollment of smokers who are unmotivated to quit. **METHODS:** Economic analysis was conducted on data from KC-Quest trial, an NIH funded large RCT comparing the efficacy of Motivational Interviewing (MI), matched intensity health education (HE), and brief advice (BA) for prompting quit attempts and cessation among smokers low in motivation to quit smoking. In this study retrospective analysis of cost data was performed to identify direct and activity-based time costs incurred for recruitment purposes. Costs were analyzed from the perspective of a researcher that seeks to replicate this recruitment protocol. To determine the most cost effective option to recruit patients for the trial one-way sensitivity analysis using a tornado diagram was conducted. All costs are reported in 2012 dollar values. **RESULTS:** A total of 774 persons were screened for participation, and 255 were ultimately enrolled in the study. Overall cost of recruitment totaled $16,931.94 (direct costs=$12,252.50; activity-based time costs=$4,679.43), translating to $21.88 per recruitment contact and $66.40 per successfully enrolled participant. The most successful recruitment methods were newspaper advertisements and word-of-mouth. Financial incentives also motivated many to participate. **CONCLUSIONS:** We are the first to report the cost of recruiting smokers with low motivation to quit and shed light on this unique challenge. Study results may inform decision-makers, researchers, and clinicians seeking to enroll for unmotivated smokers. This economic analysis can serve as a guide to determine the budget for actively enrolling these patients in future trials and suggests the most efficient means to do so.

RESPIRATORY-RELATED DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PRS20

HEALTH STATUS IN ADULT PATIENTS WITH COPD IN KOREA

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OBJECTIVES: The purpose of this study is to assess health status of Korean adults with COPD using EQ5D and the association between health status and disease severity using spirometry as a lung function measure. **METHODS:** A stratified multistage clustered probability design was used to select a nationally representative sample. From the Fourth and Fifth Korea National Health and Nutrition Examination Survey, 20,261 adults over the age of 40 years were selected. These subjects completed the utility measure, EQ-5D-3L and were separated into four severity groups according to FEV1 percent of predicted normal using the GOLD clinical guideline. Population sampling weights were applied to adjust for the over-sampling of the minority groups. Regression analysis was conducted using EQ-5D as the dependent variable to estimate the association between COPD and EQ-5D index score with SAS Ver. 9.3 program. **RESULTS:** Among 20,261 adults, 2,087 COPD patients were selected based on GOLD criteria (a ratio of FEV1 to FVC of less than 0.7). The mean utility of COPD patients was 0.906(SE 0.004) compared to 0.922(SE 0.001) in the non-COPD control group. Utility was significantly reduced due to COPD(p=0.0001). Within each GOLD stage, the variation (SE) was

wide [Stage I(n=858): 0.906(0.006); Stage II(n=1,091): 0.912(0.005); Stage III(n=119): 0.857(0.018); Stage IV(n=13): 0.780(0.071)]. EQ-5D was not significantly different by 4-stage disease severity but showed a trend of deterioration in Stage III and IV. In the post-hoc analysis, COPD patients were divided into two-stage groups [group 1: Stage I and II; group 2: Stage III and IV]. In this analysis, 2-stage severity had a negative association with utility(p=0.0009). **CONCLUSIONS:** The results demonstrate that COPD impaires utility and shows a relationship between utility and COPD disease severity in Korea.

PRS21

FACTORS CONTRIBUTING TO QUALITY OF LIFE IN COPD IN SOUTH KOREA

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OBJECTIVES: The burden of COPD is increasing in Korea.Health-realted quality of life among COPD patients should be considered. Few national strategies to prevent and manage COPD have been intervened. In this study, we investigate the factors associated with COPD patients' quality of life. **METHODS:** Data of Korean National Health and Nutrition Examination Survey(KNHANES) 2007-2012 were used. Multivariate regression anaysis was employed. Demographic variables (e.g. sex, age), socioeconomic status(SES) variables including education, insurance type, comorbidities(e.g. hypertension, diabetes, depressive disorder, cancer), severity of COPD, smoking were considered as independent variables. **RESULTS:** We found that female(beta=-0.0387, p<00001), age(beta=-0.0021,p<0.0001), Medical aid bebeficieries(beta=-0.1001,p<0.0001) showed a significantly lower score of EQ5D index. Mild(beta=0.2001, p<0.0001), moderate(beta=0.1982, p<0.0001), severe(beta=0.1765, p<0.0001) had significatly higher scores compared to that of very severe satge(GOLD IV). Education level also an important factor. Lower level of education(graduation from middle shcool or less) showed a negative association with EQ5D index score. Depression among comorbidities significantly worsened the quality of life of COPD paitents(beat=-0.7420, p<0.0001). Smoking status(current smoker, ex-smoker, non-skmoker) did not show a significant difference. **CONCLUSIONS:** Socio-economic status of COPD patients including sex, age, edication level and insurance type, were important factors related to the health-related quality of life. After controlling these factors, severe and depressive COPD patients reported their quality of life was significantly worsened. Strategies for COPD prevention and management should be developed and implemented. Improvement of health-related quality of life in COPD can be considered as an index of goals to achieve.

PRS22

HEALTH-RELATED QUALITY OF LIFE FOR PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN SOUTH KOREA

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OBJECTIVES: COPD is known as a disease with irreversible progress but preventable and managable. In Korea, COPD was ranked 12 with 242 DALYs (per 100,000) following diabetes(970 DALYs), cerebrovascular diseases(937DALYs) and asthma(709 DALYs). Health-related quality of life in COPD patients has not been investigated in Korea. **METHODS:** Data of Korean National Health and Nutrition Examination Survey(KNHANES) 2007-2012 were used. According to the GOLD criteria, we classified COPD patients into I-IV grades. EQ-5D index score were analysed by the severity of COPD and Comorbidities. Wilcoxon rank-sum test were used to compare quality of liife in COPD patients with that of the general population. SAS 9.3 version was used for analysis. **RESULTS:** Utility score for the general population was 0.9291±0.1320 while COPD patients were scored 0.9042±0.1478 showing a significant difference(p<0.0001). Comorbidities demosntrated a significant impact on the quality of life among COPD patients. Patients with hypertension(0.8863±0.1574), diabetes (0.882831±0.169179), cancer(0.8675±0.1691), and depression(0.8089±0.1784) showed a significantly lower utility score that those without comorbidities(p<0.0001, p=0.0042, p<0.0001, p=0.0687, respectively). According to the severity, mild(0.905754±0.140629) and moderate(0.9090±0.1465) COPD patients had a similar EQ5D index score. However, severe(0.8722±0.1724) and very severe(0.6816±0.2705) stages showed a significantly lower quality of life. We also found that diagnosed rate among COPD patients was only 2.96%. **CONCLUSIONS:** As severity of COPD has shown a great impact on quality of life, preventable strategy and management should be developed. Especially early diagnosis and early detection will be the first step to take for COPD management in South Korea. To do so, interdisciplenary approach should be made.

RESPIRATORY-RELATED DISORDERS – Health Care Use & Policy Studies

PRS23

PERCEPTION PATTERN ANALYSIS OF SELF-MEDICATION PRACTICES AMONG PEOPLE IN SOUTHERN DISTRICT OF KARNATAKA, INDIA

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OBJECTIVES: To determine the pattern of self-medication among the people of region and to evaluate the factors associated with self-medication. **METHODS:** The data for this study was collected by the survey method in community pharmacies. This was done by directly approaching the consumer for self-medication during the study period for their own use or as messengers for others. The structured research instrument was a simplified questionnaire, which sought information on demographic background and self-medication practices. The elicited data include demography, use of drug without doctor's prescription, type of drug used, reasons for self-medication, factors that influenced the choice of drug and source of drug. **RESULTS:** People of all socio-demographic categories practice self-medication. A total of 76.8% of the respondents indulged in self-medication practices. Of which, 33.0% used the medication inappropriately. The most frequently self-diagnosed illnesses or symptoms of illnesses were: GI illnesses, cough/cold and headache/fever. Of these illnesses, more than 35% were less than 24 hours duration and nearly 80% less than seven days duration of illness. The reasons given by respondents for self-diagnosis and self-medication were non-seriousness of the illnesses, for emergency use and prior experience about the illness with similar symptoms (39.7%) and even advice of non-physician health professional (33.5%). Whatever the duration of illnesses and reasons for self-diagnosis, nearly 65% requested drugs by mentioning the names of the drugs and more than one-fifth by telling the symptoms of their illnesses. Requests for analgesics/antipyretics were very high (60%) followed by antimicrobial drugs (40%) for all reported illness. Drug requested mostly in other conditions include cold/cough suppressants, Gastro Intestinal drugs and very low for ORS. **CONCLUSIONS:** The level of inappropriate drug use denotes self-medication as an unhealthy option, and it therefore, should be discouraged.

PRS24

DURATION OF TREATMENT IN PULMONARY TUBERCULOSIS: ARE INTERNATIONAL GUIDELINES ON THE MANAGEMENT OF TUBERCULOSIS MISSING SOMETHING?

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OBJECTIVES: The study aimed to document the duration of tuberculosis (TB) treatment, and its relationship with the characteristics of the patients. **METHODS:** This prospective follow-up cohort study was conducted at the chest clinic of Penang General Hospital between March 2010 and February 2011. Medical records and TB notification forms of all new smear positive pulmonary tuberculosis (PTB) patients, who were diagnosed during the study period, were reviewed to obtain socio-demographic and clinical data. Based on the standard guidelines, the normal benchmarks of treatment duration for the intensive- and continuation phase of TB treatment were taken as 2 and 4 months, respectively. A patient in whom the clinicians decided to extend the intensive phase (IP) for $\geq$ 2 weeks was categorized as a case of prolonged IP. The same criterion applied for the continuation phase (CP) of the treatment. **RESULTS:** Out of the total 336 patients, 261 completed the IP of the treatment. Subsequently, 226 completed the CP. The average duration of TB treatment (n = 226) was 8.19 (SD 1.65) months. 49.4% (129 out of 261) patients completed the IP in 2 months, whereby only 37.6% patients (85 out of 226) completed the CP of the treatment in 4 months. In multiple logistic regression analysis, being a smoker, body mass index less than normal and a history of $\geq$ 4 weeks cough were the predictors of longer duration of the IP, while diabetes mellitus and presence of lung cavities were the only predictors of longer duration of the CP of the treatment. **CONCLUSIONS:** The average duration of treatment in new smear positive PTB patients was longer than the targets set by World Health Organization. There is lacking a uniform international criterion to evaluate how well National Tuberculosis Program of Malaysia has performed in terms of managing duration of treatment in PTB patients.

PRS25

THE EFFECT OF BACTERIAL LYSATES ON PATIENTS WITH RECURRENT RESPIRATORY TRACT INFECTIONS: A META-ANALYSIS

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OBJECTIVES: The use of bacterial lysates as an immuno-modulator to boost immunological response in patients with Recurrent Respiratory Tract Infections and its effects on the attack frequency of respiratory infection have been widely debated. We aimed to conduct our meta-analysis on the effect of bacterial lysates plus routine care versus routine care only on the attack frequency of respiratory infection in patients with Recurrent Respiratory Tract Infections. **METHODS:** We performed a systematic review of articles published from Jan 1, 2000 to Nov 10, 2013 by searching PubMed, Embase, Cochrane Central Register of Controlled Trials, and Wanfang and China National Knowledge Infrastructure. We included all randomised trials that compared outcomes between patients with Recurrent Respiratory Tract Infections receiving bacterial lysates plus routine care with those receiving routione care only. Eligible studies, determined by consensus with predefined criteria, were reviewed and data were extracted onto a standard form. We combined data to assess the primary outcome of attack frequency of respiratory infection using the DerSimonian and Laird random effects model. **RESULTS:** Our search identified 128 reports, of which twelve studies met our inclusion criteria and were included in our meta-analysis. Analysis of the 12 randomised trials (959 patients) that reported an outcome on the attack frequency of respiratory infection showed that patients assigned to bacterial lysates plus routine care had a 2.942 reduction in respiratory tract infections compared to those assigned to routine care only (Weighted Mean Difference -2.942, 95% CI -3.600, -2.284). **CONCLUSIONS:** Bacterial lysates are associated with a decreased risk of respiratory tract infections in patients with Recurrent Respiratory Tract Infections. Further studies are needed to identify the causes of respiratory tract infections and to assess whether the attack frequency of respiratory infection differs with varying treatments of bacterial lysates.

PRS26

SMOKING CESSATION TREATMENT PATTERNS AND CHARACTERISTICS OF PATIENTS WITH COPD WHO ARE ATTEMPTING TO QUIT IN URBAN CHINA

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